GCSE

Design & Technology:

Innovator Suite

OCR GCSE in Design and Technology: Textiles Technology   J307

OCR GCSE (Short Course) in Design and Technology: Textiles Technology   J047

IMPORTANT

The Controlled Assessment evidence (candidate portfolios) can be in paper **OR** electronic format.

Centres who intend submitting **ELECTRONIC** evidence MUST:

1. Be a registered EDI (Electronic Data Information) user. For more information on EDI please go to the OCR website at www.ocr.org.uk or refer to the Entry Instructions within the Administrative Guide and Entry Procedures (E3) folder.

Basic guidance on the production of electronic Controlled Assessment is provided in Appendix D.

For further guidance on requirements for electronic Controlled Assessment, contact general.qualifications@ocr.org.uk

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Contents

1 About these Qualifications

This booklet contains OCR's GCSE (Short Course) and GCSE specification in Design & Technology: Textiles Technology for teaching from September 2009.

This fresh approach to GCSE Design & Technology: Textiles Technology reflects the status of the subject within the National Curriculum and the positive effects of the Key Stage 3 initiative now working its way through to KS4.

This specification provides an innovative and imaginative qualification rewarding flair, and reflecting the contemporary use of Information technology. One key element of this specification is to encourage candidates to recognise the contribution they can make to the environment through careful consideration and selection of sustainable resources.

The format of this specification allows for candidates to approach the course in a variety of ways. Being unitised, activities can be organised to run in harmony with the design & technology department making best use of the resources available. Candidates can follow a traditional approach to the course entering for all the units at the end of their course or they can be entered for individual units in any January and June session (see Technical Information section for terminal and retake rules).

This specification encourages candidates to be inspired, moved and changed by following a broad, coherent, satisfying and worthwhile course of study. Specifically candidates will actively:

- be engaged in the processes of design and technology in order to develop as effective and independent candidates.

- be involved in making decisions, consider sustainability and combine skills with knowledge and understanding in order to design and make quality products

- explore ways in which aesthetic, technical, economic, environmental, ethical and social dimensions interact to shape, designing and making.

- analyse existing products and produce practical solutions to needs, wants and opportunities, recognising their impact on quality of life.

- develop decision-making skills through individual and collaborative working.

- understand that designing and making reflect and influence cultures and societies, and that products have an impact on lifestyle.

- develop skills of creativity and critical analysis through making links between the principles of good design, existing solutions and technological knowledge.

1.1 GCSE (Full Course)

From September 2009 the GCSE is made up of **four** mandatory units two of which are the **two** corresponding GCSE (Short Course) units, forming 50% of the overall full course assessment and **two** further units one of which is internally assessed and forms 30% of the overall assessment and the other is externally assessed and forms 20% of overall assessment.

1.2 GCSE (Short Course)

The GCSE (Short Course) is both a 'stand-alone' qualification and also the first half of the corresponding GCSE. The GCSE (Short Course) is assessed at the same standard as the corresponding two year GCSE course.

From September 2009 the GCSE (Short Course) is made up of **two** mandatory units, one of which is internally assessed and forms 60% of the overall assessment and the other is externally assessed and forms 40% of overall assessment. These units correspond to **two** units of the GCSE (Full course) and thus allow co-teachability and flexibility in scheduling and timetabling.

1.3 Qualification Titles and Levels

These qualifications are shown on a certificate as:

- OCR GCSE in Design & Technology: Textiles Technology

- OCR GCSE (Short Course) in Design & Technology: Textiles Technology

These qualifications are approved by the regulatory authorities (QCA, ACCAC and CCEA) as part of the National Qualifications Framework.

Candidates who gain Grades D to G will have achieved an award at Foundation Level 1 (Level 1 of the National Qualifications Framework).
Candidates who gain Grades A* to C will have achieved an award at Intermediate Level 2 (Level 2 of the National Qualifications Framework).

1.4 Aims

The aims of this specification are to provide opportunities for candidates to develop knowledge and understanding through:

- responding creatively to briefs, developing their own proposals and producing specifications for products and associated services

- generating, developing and communicating ideas in a range of ways, using appropriate strategies

- recognising there are moral, cultural, economic, environmental, and sustainability issues inherent in design and technology

- using their understanding of other designers and products to inform their own practice

- planning and organising activities and then shaping, forming, mixing, assembling and finishing materials, components or ingredients as appropriate

- choosing and using hand and/or machine tools, equipment and computer-aided design/manufacture (CAD/CAM) facilities as appropriate

- solving technical problems

- reflecting critically when evaluating and modifying their ideas and proposals to improve the products throughout inception and manufacture

- designing creatively by generating, developing, planning and communicating ideas

- making products, by working skilfully and safely with tools, equipment, components and materials

- making products which are functional and are appropriate to a more sustainable future

- applying systems and control, CAD/CAM, digital media and new technologies, where appropriate to the focus areas

- analysis and evaluative processes.

1.5 Prior Learning/Attainment

Candidates who are taking courses leading to this qualification at Key Stage 4 should normally have followed the corresponding Key Stage 3 Programme of Study within the National Curriculum.

Candidates entering this course should have achieved a general educational level equivalent to National Curriculum Level 3, or a Distinction at Entry Level within the National Qualifications Framework.

2   Summary of Content

Outline of Concept

This fresh approach to GCSE Design & Technology: Textiles Technology reflects the status of the subject within the National Curriculum and the positive effects of the Key Stage 3 initiative now working its way through to KS4.

This specification provides an innovative and imaginative qualification rewarding flair, imagination and reflecting the contemporary use of materials and Information technology. One key element of this specification is to encourage candidates to recognise the contribution they can make to the environment through careful consideration and selection of sustainable resources.

The specification, which is one of six specifications making up the OCR Innovator suite of GCSE Design & Technology qualifications aims to provide a challenging yet very rewarding course for candidates and teachers alike.

In both the Full and Short Course, candidates have the opportunity to work with design concepts and materials in ways which recognise the need for wise choices being made in terms of the environment and the whole social fabric of life.

Taught as a suite of qualifications there are opportunities for efficient use of both human and physical resources. Teachers can be confident in the knowledge that they are part of a team preparing candidates for a common goal.

This particular specification aims to promote the careful and thoughtful use of fibres and fabrics and associated pre-manufactured items such as fastenings, threads, beads, ribbon, laces, interfacings etc.

2.1   GCSE Units

Unit A571: *Introduction to designing and making*

- Developing Research and Investigation skills
- Developing drawing skills
- Modelling
- Evaluating process

Unit A572: *Sustainable Design*

- Consideration of products
- Consideration of the environment
- Consideration of society and the economy

Unit A573: *Making quality products*

- Designing for a need
- Working with tools and equipment
- Evaluating the product

Unit A574: *Technical aspects of designing and making*

- Working with tools, materials
- Selecting processes
- Designing for success

2.2   GCSE (Short Course) Units

Unit A571: *Introduction to designing and making*

- Developing Research and Investigation skills
- Developing drawing skills
- Modelling
- Evaluating process

Unit A572: *Sustainable Design*

- Consideration of products
- Consideration of the environment
- Consideration of society and the economy

3   Content

3.1   Unit A571: *Introduction to designing and making*

This unit aims to give candidates an introduction to designing and making through Textiles Technology.

Candidates must select one of the published themes (see Appendix C) as a starting point for this coursework unit which forms a Controlled Assessment element of this specification. Once selected, the candidate will then need to identify a specific product or starting point that is associated with the theme. For example if the chosen theme is 'Travel' a candidate may decide to design and model a textiles product to be used 'on the move'.

Candidates undertake research associated with the specific product before establishing their own design brief and detailed specification for an improved or similarly functioning product. They develop their design and use modelling before making and testing their prototype. Throughout the process the candidate will record, research and design developments using a portfolio to include photographs and other digital media.

In order to skilfully design, model, make and test their prototype candidates should undertake the processes outlined below.

This unit is a controlled assessment unit. For further details see section 5

Candidates will be required and assessed on their ability to:	
Demonstrate Creativity	• Use appropriate recording and drawing techniques including the use of ICT • Identify complex associations linking principles of good design and technological knowledge • Identify trends in existing products and fully evaluate them against the needs of the intended user.
Develop Designing Skills	• Produce an appropriate and considered response to a design brief • Produce a detailed specification for the product • Use detailed notes and annotated drawings to record original design ideas • Use appropriate making or trialling techniques to aid product development • Use CAD to support design development • Make reasoned decisions about materials / components.
Demonstrate Good Making Skills	• Plan and organise activities • Select appropriate materials • Select appropriate equipment • Work skilfully and safely with materials and assemble components • Produce a quality product • Apply knowledge of digital media and new technologies as appropriate • Demonstrate a practical and thorough understanding and ability in solving technical problems effectively and efficiently as they occur • Record key stages in the making of the product.

| Demonstrate Critical Evaluation Skills | • Evaluate the processes involved in making the final product/prototype |
| | • Reflect on the evaluation and suggest modifications to improve the making process. |

3.2   Unit A572*: Sustainable Design*

This unit aims to develop a candidate's knowledge and understanding of sustainability, environmental concerns, cultural, moral and social issues. Candidates will look at how design and technology has evolved through examination of products from the past and present. Candidates need to consider how future designs will impact on the world in which we live. Candidates will need to study examples of both old and new products in order that they might gain awareness and understanding of trends and innovations in design and manufacture, labelling, packaging and the impact that the design of such products is having on the environment, society and the economy.

Moral, cultural, economic, environmental, and sustainability issues are inherent in design and technology. Within the commercial context, the product life cycle, choice and use of materials, planned obsolescence and eventual disposal of products are of paramount importance.

Working with Textiles Technology, candidates should develop knowledge and understanding of the subject content listed below.

The assessment of this unit is through an externally set and marked test.

The 6R's	Recycle
	• Materials that can be recycled
	• Products that use recycled materials
	• Disassembly- re processing materials for use in new products
	Reuse
	• Products that can be reused for either the same purpose or a new purpose
	• Products that can be adapted to suit an alternative use
	Reduce
	• Life cycle of a product(s) / Eco footprint
	• Built in obsolescence
	• Energy and waste of production process
	• Materials – waste
	Refuse
	• Issues relating to sustainable design
	• Materials we should refuse to use
	Rethink
	• How it is possible to approach design problems differently
	• An existing product that has become waste- e.g. utilising the materials or components for another purpose without processing it
	Repair
	• Products that can/cannot be repaired

Product Analysis and the Design of Products	Social Issues
	• Social development, through recognising the need to consider the views of others when designing and discussing designed products • Signs and symbols giving valuable information about materials, products and safety issues.
	Moral Issues • Conditions of working • Protecting the safety of users of products • Ethical trading initiative (ETI)
	Cultural Issues • Look at, respond to and value the responses of others to design solutions • The impact of different cultures on modern products
	Environmental Issues • Understand and be able to select materials that are both suitable and sustainable • The reduction in the common use of chemicals and materials dangerous to the environment i.e. bleaches, CFC's, toxic materials • Carbon footprint – transportation of materials and goods, energy usage in manufacture • Carbon offsetting • The need to dispose of redundant products and their packaging in a safe and environmentally friendly way
	Design issues • Identify how good design and product choice improves the quality of life • Examine the way that designers respond to changing styles, taste, technological advances, and environmental pressures • Eco-design. The whole system of looking at a product from design to finished article, its use of materials and energy • The globalisation of products

Delivery of the Unit

This unit should be delivered through a number of mini-tasks. These tasks will vary in nature, some will be based around group discussion, others will involve the candidate working with ideas and media, researching concepts and recording information. Activities may also involve visits to particular Technology Innovation centres, industry, local councils, museums etc.

Evidence could be collected and recorded in the form of a research report (not assessed) which can be used at the end of the unit for examination preparation.

3.3 Unit A573: *Making quality products*

In this Unit candidates will be expected to further develop skills and abilities gained while undertaking Unit A571 in order to design and make a fully functioning quality product. The type of project selected needs to be challenging but realistic in terms of the resources and time available. Candidates should be encouraged to consider their own needs/requirements or that of an identified user group as well as the situation in which the product will be used.

Candidates will be required to consider the focus of the design brief before developing a design specification. Candidates need to demonstrate their ability to plan, to develop creative and original design ideas and to carry out a range of practical activities.

Candidates will be expected to critically evaluate their ideas against the design specification to identify, with reasons, the chosen design proposal for product development. As a result of product development candidates will be expected to give reasoned decisions for the materials and equipment required for the production of the final product. Throughout the candidate will record research, design developments and production using a portfolio to include photographs and other digital media.

Candidates will be expected to test and critically evaluate their final product against a product specification.

This unit is a controlled assessment unit. See section 5 for further details.

Candidates will be required and assessed on their ability to:	
Develop and demonstrate designing skills	• Use appropriate recording and drawing techniques • Identify complex associations linking principles of good design and technological knowledge • Produce a creative and considered response to a design brief • Produce a detailed specification for the product • Use detailed notes and annotated drawings to record original design ideas • Use appropriate modelling or trialling techniques to aid product development • Use ICT/CAD/CAM to support design development • Apply knowledge of digital media and new technologies as appropriate • Use drawing and annotation clearly communicate details of the design chosen for prototype production
Demonstrate good making skills	• Plan, organise and record key manufacturing activities by means of comprehensive notes and photographic evidence • Make reasoned decisions about materials / components • Select appropriate materials • Select appropriate tools and equipment • Work skilfully and safely to shape, form, finish materials and assemble components/ingredients • Apply knowledge of systems and control, ICT and new technologies as appropriate • Complete the product to a high quality standard • Demonstrate a practical and thorough understanding and ability in solving technical problems effectively and efficiently as they arise.

| Demonstrate critical evaluation skills | • Evaluate the product against the specification |
| | • Undertake detailed testing and present meaningful conclusions |

3.4   Unit A574: *Technical aspects of designing and making*

This unit focuses on the knowledge, skills and understanding underpinning the design and manufacture of products made from Textiles Technology.

The assessment of this unit is through an externally set and externally marked test.

Candidates will need a knowledge and understanding of:

• Designing and making quality commercially manufactured products.

• Planning production with consideration to the use of time and resources.

• Performance characteristics of different materials including 'Smart' and modern.

• Tools and equipment used to make quality manufactured products, including industrial methods and new technologies.

• Processes and techniques used to make quality manufactured products, both decorative and functional.

• The impact that the use of Textiles Technology has on the environment, including the need to consider sustainability.

• Health and Safety issues.

Materials	
The origin and structure of fibres	• Natural fibres including cotton, flax, wool and silk • Regenerated cellulose fibres such as viscose • Manufactured fibres including polyester, polyamide, acrylic and elastane • Smart and Modern fibres such as microfibres used for micro-encapsulation.
Performance characteristics of fibres	• Abrasion resistance, strength, elasticity, absorbency, thermal conductivity, washability, resistance to chemicals, acid and alkaline, bleach, flame resistance, moth and mildew resistance, thermoplasticity.
The conversion of fibres into yarn and fabric and the performance characteristic of those fabrics	• Spinning • Weaving, including plain weave, twill, satin, jacquard, cut pile and looped fabrics • Knitting, including warp and weft knitting • Non-woven fabrics including wool felts, needle felts and bonded webs.

Mixing and blending of fibres and yarns, laminating and coating fabrics to improve the performance characteristics of the fabric produced.

The finishing processes applied to fibres and fabrics to improve performance and appearance	• Mechanical finishes including brushing, calendaring, pleating and shrinking • Chemical finishes including water repellent, stain resistant, antistatic, flame resistant, hygienic, rot proofing, anti-pilling, easy care, anti-felting • Dyeing and printing methods used in industry including batch dyeing, continuous dyeing, discharge printing, resist printing, transfer printing, roller printing, and screen printing.
Smart and Modern Materials	• Modern materials such as Kevlar, Nomex, Neoprene, elastanes, Polartec, breathable fabrics such as Gortex and Sympatex • Smart materials which sense and react to environmental conditions such as smart skins, anti-stress or calm inducing materials, wrinkle free garments, heat generating fibres, allergy control, sanitised fabrics, fungal fabrics, moisture management systems and intelligent polymer systems • Interactive textiles which include a microchip and conducting network – wearable electronics • Materials which respond to changes in light, temperature, pressure • Be aware of other 'Smart' and modern materials as they become available.

Recognise the importance of understanding the physical and aesthetic properties of a fabric when selecting a fabric for a specific use, as well as considering cultural, moral, cost, environmental and sustainability issues.

Understand the impact of the production, use and disposal of fabrics and fabric products on the environment.

| Pre-Manufactured Components | Components needed to manufacture a product:
• Thread
• Fastenings including zips, velcro, buttons, hook and eye, press stud, poppers, ties, laces, parachute clips, toggles, eyelets
• Decorative items including appliqué motifs, ribbon, lace, braid, ric-rac
• Construction items such as shoulder pads, cuffing, interfacing, pockets? |

Design

- Generate and record a range of innovative design solutions for a specific task/user need.
- Evaluate and modify ideas with consideration to creativity and sustainability.
- Consider the initial task, the need to be met, function and aesthetics
- Develop and model design proposals.
- Justify choice and rejection of ideas.
- Select and justify materials when designing and making products.
- Use a range of skills to communicate ideas including graphic techniques, ICT including CAD and digital technologies.
- Understand the purpose of prototyping when designing and making products.
- Identify a variety of materials used when prototyping, including card, patterns paper and fabric.
- Understand the principles of anthropometrics when designing and making products.
- Apply anthropometric data when designing and making products.

.Product Planning

- Produce a detailed plan for making that includes information on:
  - Materials and manufactured items
  - Tools and equipment,
  - Processes
  - Health and safety
  - Time schedules
- Choose and prepare materials economically considering cost, sustainability, environmental, moral and cultural issues.
- Plan work to make best use of materials, components, equipment and resources including time and energy.
- Be aware of problems that arise during production and have strategies to overcome them.

Tools and Equipment

- Knowledge and understanding of the basic textiles equipment; how to select the appropriate tool and use it safely and effectively.
- Awareness of alternative tools and equipment which can be used for the same task.
- Safety checks to carry out on electrical equipment before use.
- Checks before use including correct settings for sewing machines and irons.

Processes

- Use of patterns to cut fabric to make products, including the use of commercial patterns and the construction of patterns for simple products.
- An understanding of pattern symbols used, what they mean and why they are important.
- Transferring pattern markings including tailor tacks, tailor's chalk / pencil, tracing wheel and carbon paper.
- Disposal of fullness including darts, gathers, pleats, tucks, the use of elastic and drawstrings in a casing.
- Temporary methods of joining fabrics such as pinning and tacking.
- Seams including the plain or open seam, double stitched seam, French seam and overlocked seam. Methods of neatening edges where appropriate.
- Neatening edges including overlocking, bias binding, facings and hems.
- Attaching fastenings and other pre-manufactured components.
- Pressing and finishing methods.
- Quality control checks during production and once the product is complete.
- Industrial methods for the techniques used when designing and making textile products.
- Colouring fabric including tie-dye, batik, block print, diffusing.
- Techniques using fabric and thread including quilting, appliqué, free machine embroidery, computer controlled stitching, patchwork, application of pre- manufactured items such as beads and sequins.

Computer Applications

- Use of CAD in the school environment for producing drawings and 2D/3D images.
- On-screen modelling and manipulation of images.
- Appropriate use of text, database and graphics software in school and commercial situations.
- Storing and sharing data electronically.
- Application of CAD/CAM/CIM to the designing and making of models and prototypes.
- Application of CAD/CAM to one-off and quantity production.
- Computer control of machines (CNC) including sewing and embroidery machines, fabric printing, fabric finishing, and cutters.

Industrial Production

Learners should understand:

- Basic commercial production methods – the appropriate application of one-off, batch and just in time (JIT) production methods to the manufacture of textiles products.
- Methods of pattern production and grading.
- Methods of producing lay plans.
- Methods of laying out fabric and cutting out.
- Understand the 6R's: Recycle, Re-use, Reduce, Refuse, Rethink and Repair.
- Finishing.

Health and Safety

- Understand the responsibilities of designers and manufacturers to the workforce, the consumer and the general public.
- Understand the importance of personal safety when engaged in designing and making activities, including:

   Personal protective equipment

   Machine guards

   Dust and fume extraction

   Waste disposal

   Accident procedures
- Understand basic risk assessment procedures.
- Understand COSHH.
- Understand the importance of following instructions provided for certain materials and processes.

Quality

- Distinguish between quality of design and quality of manufacture.
- Show how the quality of a product may be affected by materials and processes used in its manufacture.
- Understand the importance of accuracy when making products.
- Generate designs for templates and patterns to control accuracy in batch production of products.
- Describe simple quality control checks to ensure accuracy and quality of finish.

Product Evaluation

- Establish the function of commercially manufactured textile products; determine what the product was designed to do.
- Determine the intended market or user of the product.
- Identify the materials, and components from which products are made. Give reasons why specific materials have been used by referring to the working properties of materials.
- Identify the process used to make the product.
- Compare a variety of textile products designed to meet the same need.
- Test their own and commercially manufactured textile products to determine fitness for purpose and identify improvements to the design and materials and processes used with reference to innovation, environmental and sustainability issues.

Delivery of the Unit

In this unit, candidates could develop their knowledge and understanding through:
- Focused practical tasks that develop a range of technical skills and knowledge of materials and processes.
- Product Analysis.
- Design and make assignments that include activities relating to sustainability of products and resources as well as industrial practices.

These tasks will vary in nature, some will be based around group discussion, others will involve the candidate working with ideas and media, researching concepts and recording information. Activities may also involve visits to particular Technology Innovation centres, museums and industry.

Evidence should be collected and recorded in the form of a research report (not assessed) which can be used at the end of the unit for examination preparation.

4 Schemes of Assessment

4.1 GCSE Scheme of Assessment

GCSE Design & Technology: Textiles Technology (J307)

Unit A571: *Introduction to designing and making*

30% of the total GCSE marks or 60% of the GCSE (Short Course) marks 15 hrs controlled assessment 60 marks	This unit will involve candidates researching, designing and subsequently modelling a functional prototype. Candidates must select a theme set by OCR. See Appendix C. This theme can, however, be contextualised in order to best suit centre-specific circumstances. • Teachers are required to ensure that candidates do **not** pursue the same 'theme' for their work as submitted or intended for submission for Unit A573. • Tasks (worksheets, modelling and prototyping) will be conducted under informal teacher supervision within tight guidelines specified by OCR. See section 5. • In addition to the formal 20 hours controlled assessment there should also be further teaching time to increase the candidates' depth of knowledge and understanding in preparation for the controlled assessment. The task will require the candidate to produce: • A number of concise worksheets (A3, A4 or digital equivalent) showing design development and modelling which may include the use of ICT used to support the designing process • A prototype product, capable of evaluation. • A minimum of two digital images/photographs of the final product showing front and back views of the product. • Digital images/photographs of any models or mock-ups used by the candidate when designing, modelling or testing. • A completed OCR cover sheet. The task must allow the candidate to: • Develop and use Research and Investigation skills • Develop Drawing skills • Use Modelling • Produce a prototype • Evaluate the process

Candidates must use appropriate ICT to help with their work. This might include CAD/CAM, control programmes, data analysis, and ICT based sources for research and design relevant to the task.

The evidence presented for assessment must be submitted on paper or in electronic format. All digital evidence must be presented in an approved OCR format. See section 6.13

The whole internal assessment, including the final product, must not exceed 20 hours of work and be undertaken under informal teacher supervision. Some of the work, by its very nature, may be undertaken outside school under limited supervision e.g. research work, testing of the final product. See section 5 for further details.

It is not expected that the final product should accompany the portfolio during the external moderation process. However the final product should be available should visiting moderation take place as part of monitoring.

Assessment will be against the Internal Assessment Objectives; AO1, AO2 and AO3.
AO1 – 16 marks
AO2 – 36 marks
AO3 – 8 marks

This controlled assessment is marked internally and externally moderated

Unit A572: *Sustainable Design*

20% of the total GCSE marks or 40% of the GCSE (Short Course) marks 1 hr written paper 60 marks	The paper will consist of questions that focus on sustainable design. Quality of written communication is assessed in this unit. See section 4.7
	Section A: consists of fifteen multiple choice questions.
	Section B: consists of three questions requiring answers that involve sketches, annotation and short sentences.
	Assessment will be against the Assessment Objectives AO1, AO2 and AO3. AO1 – 27 marks AO2 – 21marks AO3 – 12 marks
	This unit is externally examined.

Unit A573: *Making quality products*

30% of the total GCSE marks
15 hrs controlled assessment

60 marks

This unit will focus on the design and manufacture of a complete product from a theme set by OCR. See Appendix C. This should involve the candidate in the identification of a suitable design opportunity, generation of design ideas showing creativity, modelling and skilful manufacture of a quality product recording the key stages/processes of making and critical evaluation.

- Teachers are required to ensure that candidates do **not** pursue the same 'theme' for their work as submitted or intended for submission for Unit A571.
- Tasks (worksheets and making) will be conducted under informal teacher supervision within tight guidelines specified by OCR. See section 5.
- In addition to the formal 20 hours controlled assessment there should also be further teaching time to increase the candidates' depth of knowledge and understanding in preparation for the controlled assessment.

The task will require the candidate to produce:
- A production plan
- A number of concise worksheets (A3, A4 or digital equivalent) showing design development and modelling which may include the use of ICT used to support the designing process
- A product capable of evaluation.
- A minimum of two digital images/photographs of the final product showing front and back views of the product in use.
- Digital images/photographs of any models or mock-ups used by the candidate when designing, modelling or testing.
- A completed OCR cover sheet.
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The task will allow the candidate to
- Design for a need
- Work with tools and equipment
- Make a product
- Evaluate the product

Candidates must use appropriate ICT to help with their work, including CAD/CAM, control programmes, data analysis, and ICT based sources for research and design relevant to the task.

The evidence presented for assessment must be a portfolio of work submitted on paper or in electronic format. All digital evidence must be presented in an approved OCR format. See section 6.13

The whole internal assessment portfolio, including the final product, must not exceed 20 hours of work and be undertaken under informal teacher supervision. Some of the work, by its very nature, may be undertaken outside school under limited supervision e.g. research work, testing of the final product. See section 5 for further details.

This unit is internally marked and externally moderated.
External moderation is Postal (paper or CD) or Web-based.

It is not expected that the final product should accompany the portfolio during the external moderation process. However the final product should be available should visiting moderation take place as part of monitoring.

Assessment will be against the Internal Assessment Objectives AO2 and AO3.
AO2 – 50 marks
AO3 – 10 marks

This controlled assessment is marked internally and externally moderated.

Unit A574: *Technical aspects of designing and making*

20% of the total GCSE marks 1 hour 15 minutes written paper 60 marks	The paper will consist of five questions that focus on technical aspects of designing and making. Each question is worth 12 marks.
	Section A consists of three questions based on the technical aspects of working with materials, tools and equipment.
	Section B consists of two questions on the design of products reflecting the wider aspects of sustainability and human use. One of these questions will require a design response.
	Assessment will be against the Assessment Objectives AO1 and AO3. AO1 – 51 marks AO3 – 9 marks
	This unit is externally assessed.

4.2   GCSE (Short Course) Scheme of Assessment

Candidates taking the GCSE (Short Course) in Design and Technology: Textiles Technology (J047) will need to be entered for Unit A571 and Unit A572. The scheme of assessment for these units is contained within section 4.1.

4.3   Entry Options

GCSE candidates must be entered for the appropriate units. All four units for GCSE and two units (A571 and A572) for the Short Course GCSE

Candidates must also be entered for certification to claim their overall GCSE qualification grade. All candidates should be entered under the following certification codes:

OCR GCSE in Design and Technology: Textiles Technology – J307

OCR GCSE (Short Course) in Design and Technology: Textiles Technology – J047

4.4   Tiers

This scheme of assessment is untiered, covering all of the ability range grades from A* to G. Candidates achieving less than the minimum mark for Grade G will be ungraded.

4.5   Assessment Availability

There are two examination series each year, in January and June.

From January 2010 all units will be available for assessment. All units will be available for assessment each January and June series.

4.6   Assessment Objectives

Candidates are expected to demonstrate the following in the context of the content described:

AO1

- recall, select and communicate their knowledge and understanding in design and technology including its wider effects;

AO2

- apply knowledge, understanding and skills in a variety of contexts and in designing and making products;

AO3

- analyse and evaluate products, including their design and production.

AO weightings – GCSE

The relationship between the components and the assessment objectives of the scheme of assessment is shown in the following grid.

Unit	% of GCSE			Total
	AO1	AO2	AO3	
Unit A571: *Introduction to designing and making*	8	18	4	30
Unit A572: *Sustainable Design*	9	7	4	20
Unit A573: *Making quality products*		25	5	30
Unit A574: *Technical aspects of designing and making*	17		3	20
	34%	50%	16%	100%

AO weightings – GCSE (Short Course)

The relationship between the components and the assessment objectives of the scheme of assessment is shown in the following grid.

Unit	% of GCSE (Short Course)			Total
	AO1	AO2	AO3	
Unit A571: *Introduction to designing and making*	16	36	8	60
Unit A572: *Sustainable Design*	18	14	8	40
	34%	50%	16%	100%

4.7 Quality of Written Communication

Quality of written communication is assessed in unit A572.

Candidates are expected to:

- ensure that text is legible and that spelling, punctuation and grammar are accurate so that meaning is clear;

- use technical language as appropriate

- present information in a form that suits its purpose;

- use a suitable structure and style of writing.

GCSE Design & Technology: Textiles Technology

5 Controlled Assessment

5.1 The controlled assessment units

Units A571 and A573 have been designed to be internally assessed, applying the principles of controlled assessment. Controls are set within the assessments so that validity and reliability are ensured and the assessors can confidently authenticate the candidates' work. These controls take a variety of forms in each of the stages of the assessment process: task setting, task taking and task marking. Within each of these three stages there are different levels of control. This section sets out the overall OCR approach, but the Scheme of Assessment sections of the units include more detail and any specific requirements.

5.2 Task setting

5.2.1 The OCR approach

OCR will assume a high level of control in relation to the setting of tasks. A number of controlled assessment tasks will be available from OCR for the controlled assessment units. These tasks have been designed to meet the full assessment requirements of the unit. Candidates will need to take part in a planned learning programme that covers the underpinning knowledge and skills of the unit in addition to completing the evidence requirements of the designated assessment tasks.

5.2.2 Using controlled assessment tasks

Centres can choose one from a number of theme based tasks offered by OCR. See Appendix C. These tasks can be used with a minimum amount of adaptation or they can be adapted so that they allow the usage of local resources available to any centre. These tasks may also be set within overarching scenarios and briefs more relevant to centres' own environment and targeted at their particular cohorts of candidates.

Controlled assessment tasks may be adapted by centres in ways which will not put at risk the opportunity for candidates to meet the Assessment Criteria, including the chance to gain marks at the highest level. For some units this may allow for little to be adapted other than minor cosmetic details eg the description and nature of the product on which a task is based. For other units the medium in which the candidates are working may be a matter of choice. Each controlled assessment task (Appendix C) will include a section which briefly specifies the type and degree of adaptation which is appropriate.

The same OCR controlled assessment task must NOT be used as the practice material and then as the actual live assessment material. Centres should devise their own practice material using the OCR specimen controlled assessment task as guidance.

5.3 Task taking

5.3.1 The OCR approach

For GCSE in Design and Technology: Textiles Technology OCR will assume a medium level of control in the undertaking of tasks. The task taking parameters will be defined for several key controls and the remainder set by centres as outlined below.

5.3.2 Definitions of the controls

(a) **Authenticity control:** Candidates will complete all work for assessment under direct teacher supervision except as outlined below. For GCSE in Textiles Technology, most, but not all, work for assessment would be under direct teacher supervision, for example, it is acceptable for some aspects of exploration to be outside the direct supervision of the teacher but the teacher must be able to authenticate the work and insist on acknowledgement and referencing of any sources used.

(b) **Feedback control:** Feedback to candidates will be encouraged but tightly defined. Within GCSE in Textiles Technology OCR expects teachers to supervise and guide candidates who are undertaking work which is internally assessed. The degree of teacher guidance in candidates' work will vary according to the kinds of work being undertaken. It should be remembered, however, that candidates are required to reach their own judgements and conclusions. When supervising tasks, teachers are expected to:

- Offer candidates advice about how best to approach such tasks

- Review candidates' work, and provide advice at a general level. Teachers must not, however, provide detailed and specific advice on how the work may be improved to meet the assessment criteria

- Exercise continuing supervision of work in order to monitor progress and to prevent plagiarism

- Exercise continuing supervision of practical work to ensure essential compliance with Health and Safety requirements

- Ensure that the work is completed in accordance with the specification requirements and can be assessed in accordance with the specified marking criteria and procedures

(c) **Time control:** The time limit available to candidates to complete the assessment task is 20 hours as specified within the unit. Tasks will be set within a broader learning programme which will allow the acquisition of subject specific knowledge and the development of appropriate practical skills.

Controlled assessed work should be completed within the time limit and supervised and marked by the teacher. Some of the work, by its very nature, may be undertaken outside the centre, e.g. research work, testing, etc. It is likely that using or applying this material will be undertaken under direct teacher supervision. With all internally assessed work, the teacher must be satisfied that the work submitted for assessment is the candidate's own work and be able to authenticate it using the specified procedure.

(d) **Collaboration control:** Candidates must complete and/or evidence all work individually. With reference to collaboration control, all assessment evidence will be provided by the individual candidate. Where group work is undertaken it is vital to be able to identify the unique individual contribution made by each candidate.

(e) **Resource control:** Candidates will need to be provided with the most appropriate materials and equipment to allow them full access to the marking criteria. For units A571 and A573 basic workshop equipment will be adequate, however, the use of specialist equipment and ICT may be required to enable the candidate to produce the desired outcome. Candidates may also need access to resources and processes only available outside the centre environment.

5.3.3 Quality assuring the controls

It is the responsibility of the Head of Centre to ensure that the controls set out in the specification and the individual units are imposed.

5.3.4 Completing the tasks

Candidates should be allowed sufficient time to complete all of the tasks. It is suggested that evidence is produced in several sessions, each focussing on a specific task within the overall task or scenario. These may be interspersed with opportunities to learn knowledge and develop appropriate practical skills

Each candidate must produce individual and authentic evidence for each of the tasks. It is particularly important that candidates working in groups, where the unit allows this, should still produce individual evidence of their contribution to ongoing group work and any final realisation or outcome.

Centre staff may give support and guidance to candidates. This support and guidance should focus on checking that candidates understand what is expected of them and that they work safely. Candidates will also need support and guidance when accessing materials provided by the centre.

Candidates may use information from any relevant source to help them with producing evidence for the tasks.

In general, candidates must be guided on the use of information from other sources to ensure that confidentiality and intellectual property rights are maintained at all times. It is essential that any material directly used from a source is appropriately and rigorously referenced. Where a dataset or case material is provided it is acknowledged that candidates in their responses will refer to situations in the assessment material but as this is fictitious this does not break any rules of confidentiality or copyright.

5.3.5 Presentation of work

Candidates must observe certain procedures in the production of controlled assessments.

- Tables, graphs and spreadsheets may be produced using appropriate ICT. These should be inserted into the report at the appropriate place.

- Any copied material must be suitably acknowledged.

- Quotations must be clearly marked and a reference provided wherever possible.

- Work submitted for moderation or marking must be clearly identified with the:

centre number;
centre name;
candidate number;
candidate name;
specification code and title;
task title.

Work submitted on paper for moderation must be secured either in a notebook, portfolio case or by treasury tags. Work submitted in digital format (CD or online) must be in a suitable file structure with each file clearly named with the unit code, centre number and candidate number.

5.4 Task marking

5.4.1 The OCR approach

For GCSE in Design and Technology: Textiles Technology OCR will assume a medium level of control in relation to the marking of tasks. All controlled assessed units will be marked by the centre assessor(s) using awarding body marking criteria and guidance and moderated by the OCR appointed moderator. For this GCSE external moderation will take the form of postal moderation or e-moderation where digital evidence in uploaded to the OCR Repository.

5.4.2 Applying the assessment criteria

The starting point for marking the tasks is the Marking Criteria within each unit. These contain levels of the skills, knowledge and understanding that the candidate is required to demonstrate. Before the start of the course, and for use at INSET training events, OCR will provide exemplification through real or simulated candidate work which will help to clarify the level of achievement the assessors will be looking for.

5.4.3 Use of 'best fit' approach to marking grids

The assessment task(s) for each unit should be marked by the teacher according to the given marking criteria within the relevant unit using a 'best fit' approach. For each of the assessment criteria, one of the descriptors provided in the marking grid that most closely describes the quality of the work being marked should be selected.

Marking should be positive, rewarding achievement rather than penalising failure or omissions. The award of marks **must be** directly related to the marking criteria.

Step 1: Teachers use their professional judgement in selecting the descriptor that best describes the work of the candidate.

Step 2: Teachers select the most appropriate mark within the descriptor, teachers should use the following guidance:

- Where the candidate's work *convincingly* meets the statement, the highest mark should be awarded;

- Where the candidate's work *adequately* meets the statement, the most appropriate mark in the middle range should be awarded;

- Where the candidate's work *just* meets the statement, the lowest mark should be awarded.

Centres should use the full range of marks available to them; centres must award *full* marks in any band for work which fully meets that descriptor. This is work which is 'the best one could expect from candidates working at that level'. Where there are only two marks within a band the choice will be between work which, in most respects, meets the statement and work which just meets the statement. For wider mark bands the marks on either side of the middle mark(s) for adequately met' should be used where the standard is lower or higher than 'adequate' but **not** the highest or lowest mark in the band.

Only one mark per unit will be entered. The final mark for the candidate for each unit is out of a total of 60 and is found by totalling the marks for each of the marking criteria strands.

5.4.4 Authentication

Teachers/course tutors must be confident that the work they mark is the candidate's own. This does not mean that a candidate must be supervised throughout the completion of all work but the teacher/course tutor must exercise sufficient supervision, or introduce sufficient checks, to be in a position to judge the authenticity of the candidate's work.

Wherever possible, the teacher/course tutor should discuss work-in-progress with candidates. This will not only ensure that work is underway in a planned and timely manner but will also provide opportunities for assessors to check authenticity of the work and provide general feedback.

Candidates must not plagiarise. Plagiarism is the submission of another's work as one's own and/or failure to acknowledge the source correctly. Plagiarism is considered to be malpractice and could lead to the candidate being disqualified. Plagiarism sometimes occurs innocently when candidates are unaware of the need to reference or acknowledge their sources. It is therefore important that centres ensure that candidates understand that the work they submit must be their own and that they understand the meaning of plagiarism and what penalties may be applied. Candidates may refer to research, quotations or evidence but they must list their sources. The rewards from acknowledging sources, and the credit they will gain from doing so, should be emphasised to candidates as well as the potential risks of failing to acknowledge such material. Centres should reinforce this message to ensure candidates understand what is expected of them.

Please note: Centres must confirm to OCR that the evidence produced by candidates is authentic. The Centre Authentication Form (CCS160) provided includes a declaration for assessors to sign. It is a requirement of the QCA Common Criteria for all Qualifications that proof of authentication is received. Failure to provide centre authenticaion could result in candidates being penalised.

5.4.5 Internal standardisation

It is important that all internal assessors, working in Design & Technology, work to common standards. Centres must ensure that the internal standardisation of marks across assessors and teaching groups takes place using an appropriate procedure.

This can be done in a number of ways. In the first year, reference material and OCR training meetings will provide a basis for Centres' own standardisation. In subsequent years, this, or Centres' own archive material, may be used. Centres are advised to hold preliminary meetings of staff involved to compare standards through cross-marking a small sample of work. After most marking has been completed, a further meeting at which work is exchanged and discussed will enable final adjustments to be made.

5.4.6 Moderation

- Teachers mark the tasks using the assessment criteria and guidelines provided by OCR.

- OCR moderators externally moderate the teachers' marking to ensure that the assessment criteria have been applied fairly and consistently to the national standard. On the basis of this moderation scaled adjustments may be recommended

Following marking and internal standardisation by the centre, candidate marks are submitted to OCR by 10 January for the January examination or 15 May for the June examination, after which moderation takes place in accordance with OCR procedures. The purpose of moderation is to ensure that the standard of the award of marks for work is the same for each centre and that each teacher has applied the standards appropriately across the range of candidates within the centre.

The sample of work which is presented to the Moderator for moderation must show how the marks have been awarded in relation to the marking criteria defined in Appendix B

Each candidate's work should have a cover sheet attached to it with a summary of the marks awarded for each task. If the work is to be submitted in digital format this cover sheet should also be submitted electronically within each candidate's files.

5.5 Minimum Requirements for Controlled Assessment

There should be clear evidence that work has been attempted and some work produced.

If a candidate submits no work for an internally assessed component, then the candidate should be indicated as being absent from that component on the mark sheets submitted to OCR. If a candidate completes any work at all for an internally assessed component, then the work should be assessed according to the internal assessment objectives and marking instructions and the appropriate mark awarded, which, for work worthy of no marks will be zero.

6   Technical Information

6.1   Making Unit Entries

Centres can enter candidates for all units, in a traditional linear fashion, at the end of the course OR at any June or January session subject to the terminal rules.

Please note that centres must be registered with OCR in order to make any entries, including estimated entries. It is recommended that centres apply to OCR to become a registered centre well in advance of making their first entries. Centres must have made an entry for a unit in order for OCR to supply the appropriate forms and/or moderator details for controlled assessments.

It is essential that unit entry codes are quoted in all correspondence with OCR.

Unit Entry code	Component code	Submission method	Unit titles
A571	/01	*Postal moderation*	Introduction to designing and prototyping
	/02	*OCR-Repository*	
A572	-	-	Sustainable design
A573	/01	*Postal moderation*	Making quality products
	/02	*OCR-Repository*	
A574	-	-	Technical aspects of designing and making

6.2   Terminal Rules

Candidates must take at least 40% of the assessment in the same series they enter for [either] the full course [or short course] qualification certification.

This rule means that candidates certificating for GCSE Design & Technology: Textiles Technology (J307) must also be entered in the same examination session for ANY two of the four units.

This rule means that candidates certificating for GCSE (Short Course) Design & Technology: Textiles Technology (J047) must also be entered in the same examination session for ANY one of the two units.

6.3   Unit and Qualification Re-sits

Candidates may re-sit each unit once before entering for certification for a GCSE or GCSE (Short Course).

Candidates may enter for the qualifications an unlimited number of times.

6.4   Making Qualification Entries

Candidates must enter for qualification certification (J307, J047) separately from unit assessment(s). If a certification entry is not made, no overall grade can be awarded.

Candidates may enter for:

- GCSE certification (entry code J307).

- GCSE (Short Course) certification (entry code J047).

A candidate who has completed all the units required for the qualification must enter for certification in the same examination series in which the terminal rules are satisfied.

Short Course GCSE certification is available from June 2010
Full GCSE certification is available from June 2011

6.5   Grading

Both GCSE (Short Course) and GCSE results are awarded on the scale A*-G. Units are awarded a* to g. Grades are awarded on certificates. However, results for candidates who fail to achieve the minimum grade (G or g) will be recorded as unclassified (U or u) and this is not certificated.

Both GCSE (Short Course) and GCSE are unitised schemes. Candidates can take units across several different series provided the terminal rules are satisfied. They can also re-sit units or choose from optional units available. When working out candidates' overall grades OCR needs to be able to compare performance on the same unit in different series when different grade boundaries have been set, and between different units. OCR uses a Uniform Mark Scale to enable this to be done.

A candidate's uniform mark for each unit is calculated from the candidate's raw marks on that unit. The raw mark boundary marks are converted to the equivalent uniform mark boundary. Marks between grade boundaries are converted on a pro rata basis.

When unit results are issued, the candidate's unit grade and uniform mark are given. The uniform mark is shown out of the maximum uniform mark for the unit e.g. 41/80.

The specification is graded on a Uniform Mark Scale. The uniform mark thresholds for each of the assessments are shown below:

(GCSE) Unit Weighting	Maximum Unit Uniform Mark	Unit Grade								
		a*	a	b	c	d	e	f	g	u
20%	80	72	64	56	48	40	32	24	16	0
30%	120	108	96	84	72	60	48	36	24	0

Candidate's uniform marks for each module are aggregated and grades for the specification are generated on the following Uniform Mark Scale.

Qualification	Max UMS	Qualification Grade								
		A*	A	B	C	D	E	F	G	U
GCSE (Short Course)	200	180	160	140	120	100	80	60	40	0
GCSE	400	360	320	280	240	200	160	120	80	0

Awarding Grades

The written papers will have a total weighting of 40% and controlled assessment a weighting of 60%.

A candidate's uniform mark for each paper will be combined with the uniform mark for the controlled assessment to give a total uniform mark for the specification. The candidate's grade will be determined by the total uniform mark.

6.6   Result Enquiries and Appeals

Under certain circumstances, a centre may wish to query the grade available to one or more candidates or to submit an appeal against an outcome of such an enquiry. Enquiries about unit results must be made immediately following the series in which the relevant unit was taken.

For procedures relating to enquires on results and appeals, centres should consult the *Administrative Guide for General Qualifications* and the document *Enquiries about Results and Appeals – Information and Guidance for Centres* produced by the Joint Council. Copies of the most recent editions of these papers can be obtained from OCR.

6.7   Shelf-Life of Units

Individual unit results, prior to certification of the qualification, have a shelf-life limited only by that of the qualification.

6.8 Guided Learning Hours

GCSE Design and Technology: Textiles Technology requires 120-140 guided learning hours in total.

GCSE (Short Course) in Design and Technology: Textiles Technology requires 60-70 guided learning hours in total.

6.9 Code of Practice/Subject Criteria/Common Criteria Requirements

These specifications comply in all respects with the revised *GCSE, GCE and AEA Code of Practice* as available from the QCA website, *The Statutory Regulation of External Qualifications 2004* and the subject criteria for GCSE Design and Technology.

6.10 Prohibited Qualifications and Classification Code

Candidates who enter for this OCR GCSE specification may not also enter for any other GCSE specification with the certification title *Design and Technology: Textiles Technology* in the same examination series.

Every specification is assigned to a national classification code indicating the subject area to which it belongs.

The classification code for these specifications is 9050.

Centres should be aware that candidates who enter for more than one GCSE qualification with the same classification code will have only one grade (the highest) counted for the purpose of the School and College Achievement and Attainment Tables

6.11 Disability Discrimination Act Information Relating to this Specification

GCSEs often require assessment of a broad range of competences. This is because they are general qualifications and, as such, prepare candidates for a wide range of occupations and higher level courses.

The revised GCSE qualifications and subject criteria were reviewed to identify whether any of the competences required by the subject presented a potential barrier to any disabled candidates. If this was the case, the situation was reviewed again to ensure that such competences were included only where essential to the subject. The findings of this process were discussed with disability groups and with disabled people.

Reasonable adjustments are made for disabled candidates in order to enable them to access the assessments and to demonstrate what they know and can do. For this reason, very few candidates will have a complete barrier to the assessment. Information on reasonable adjustments is found in *Regulations and Guidance Relating to Candidates who are Eligible for Adjustments in Examinations* produced by the Joint Council www.jcq.org.uk.

Candidates who are unable to access part of the assessment, even after exploring all possibilities through reasonable adjustments, may still be able to receive an award based on the parts of the assessment they have taken.

6.12 Arrangements for Candidates with Particular Requirements

Candidates who are not disabled under the terms of the DDA may be eligible for access arrangements to enable them to demonstrate what they know and can do. Candidates who have been fully prepared for the assessment but who are ill at the time of the examination, or are too ill to take part of the assessment, may be eligible for special consideration. Centres should consult the *Regulations and Guidance Relating to Candidates who are Eligible for Adjustments in Examinations* produced by the Joint Council.

6.13 OCR Repository

The OCR-Repository allows centres to store controlled assessment electronically and to submit their moderation sample in electronic format.

The OCR GCSE Design and Technology: Textiles Technology units A571 and A573 can be submitted electronically: please check Section 6.1 for unit entry codes for the OCR-Repository.

More information on the OCR-Repository can be found in Appendix D: Guidance for the Production of Electronic Assessment.

7 Other Specification Issues

7.1 Overlap with other Qualifications

There is no significant overlap between the content of these specifications and those for other GCSE qualifications except for GCSE Design & Technology: Industrial Technology.

7.2 Progression from these Qualifications

GCSE qualifications are general qualifications which enable candidates to progress either directly to employment, or to proceed to further qualifications.

Progression to further study from GCSE will depend upon the number and nature of the grades achieved. Broadly, candidates who are awarded mainly Grades D to G at GCSE could either strengthen their base through further study of qualifications at Level 1 within the National Qualifications Framework or could proceed to Level 2. Candidates who are awarded mainly Grades A* to C at GCSE would be well prepared for study at Level 3 within the National Qualifications Framework.

Candidates may progress to GCE in Design & Technology. This specification also provides progression from the Entry Level Certificate in Textiles Technology.

7.3 Spiritual, Moral, Ethical, Social, Legislative, Economic and Cultural Issues

This specification offers opportunities which can contribute to an understanding of these issues in all the units.

7.4 Sustainable Development, Health and Safety Considerations and European Developments consistent with international agreements

These specifications support these issues, consistent with current EU agreements, in all units

7.5 Avoidance of Bias

OCR has taken great care in preparation of these specifications and assessment materials to avoid bias of any kind.
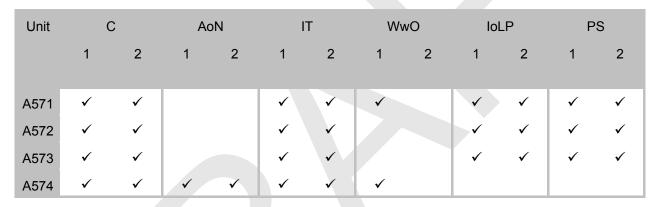
7.6 Language

These specifications and associated assessment materials are in English only.

7.7 Key Skills

This specification provides opportunities for the development of the Key Skills of *Communication*, *Application of Number*, *Information Technology*, *Working with Others*, *Improving Own Learning and Performance* and *Problem Solving* at Levels 1 and/or 2. However, the extent to which this evidence fulfils the Key Skills criteria at these levels will be totally dependent on the style of teaching and learning adopted for each unit.

The following table indicates where opportunities may exist for at least some coverage of the various Key Skills criteria at Levels 1 and/or 2 for each unit.

Unit	C		AoN		IT		WwO		IoLP		PS	
	1	2	1	2	1	2	1	2	1	2	1	2
A571	✓	✓			✓	✓	✓		✓	✓	✓	✓
A572	✓	✓			✓	✓			✓	✓	✓	✓
A573	✓	✓			✓	✓			✓	✓	✓	✓
A574	✓	✓	✓	✓	✓	✓	✓					

Detailed opportunities for generating Key Skills evidence through this specification are posted on the OCR website (www.ocr.org.uk). A summary document for Key Skills Coordinators showing ways in which opportunities for Key Skills arise within GCSE courses has been published.

7.8 ICT

In order to play a full part in modern society, candidates need to be confident and effective users of ICT. Where appropriate, candidates should be given opportunities to use ICT in order to further their study of CAD, CAM, data handling, word processing.

The assessment of this course, for example, requires candidates to *produce creative and original ideas by generating, developing and communicating designs using appropriate strategies including the use of CAD.*

7.9 Citizenship

Since September 2002, the National Curriculum for England at Key Stage 4 has included a mandatory programme of study for Citizenship. Parts of this Programme of Study may be delivered through an appropriate treatment of other subjects.

There are opportunities for developing knowledge, skills and understanding of citizenship issues particularly in units A571 and A573.

Appendix A: Grade Descriptions

Grade descriptions are provided to give a general indication of the standards of achievement likely to have been shown by candidates awarded particular grades. The descriptions must be interpreted in relation to the content in the specification; they are not designed to define that content. The grade awarded will depend in practice upon the extent to which the candidate has met the assessment objectives overall. Shortcomings in some aspects of the assessment may be balanced by better performance in others.

The grade descriptors have been produced by the regulatory authorities in collaboration with the awarding bodies.

Grade F

Candidates recall, select and communicate knowledge and understanding of basic aspects of design and technology, including its wider effects.

They apply limited knowledge, understanding and skills to plan and carry out simple investigations and tasks, with an awareness of the need for safety and precision. They modify their approach in the light of progress.

They review their evidence and draw basic conclusions.

Grade C

Candidates recall, select and communicate sound knowledge and understanding of design and technology, including its wider effects.

They apply knowledge, understanding and skills in a range of situations to plan and carry out investigations and tasks. They test their solutions, working safely and with precision.

They review the evidence available, analysing and evaluating some information clearly, and with some accuracy. They make judgements and draw appropriate conclusions.

Grade A

Candidates recall, select and communicate detailed knowledge and thorough understanding of design and technology, including its wider effects.

They apply relevant knowledge, understanding and skills in a range of situations to plan and carry out investigations and tasks effectively. They test their solutions, working safely and with a high degree of precision.

They analyse and evaluate the evidence available, reviewing and adapting their methods when necessary. They present information clearly and accurately, making reasoned judgements and presenting substantiated conclusions.

Appendix B: Marking Criteria for Controlled Assessments

Unit A571

Basic ability	Demonstrates ability	Works competently with independence
Cultural Understanding	**Cultural Understanding**	**Cultural Understanding**
• Identify using one or two simple examples of textiles products how designing and making reflects and influences culture and society. • Identify using one or two simple examples how textiles products can improve lifestyle and choice. **[0 - 2]**	• Identify using a range of textile examples how designing and making reflects and influences culture and society. • Identify using examples how textile products can improve lifestyle and choice. **[3 - 5]**	• Identify using appropriate examples of textile products how designing and making reflects and influences culture and society. • Identify and compare using appropriate examples how textile products can improve lifestyle and choice. **[6 - 8]**
Creativity	**Creativity**	**Creativity**
• Make simple/limited links between principles of good design and technological knowledge. • Identify one or two trends in existing textile solutions and use this understanding in a design context. **[0 - 3]**	• Identify associations linking principles of good design and technological knowledge. • Demonstrate the significance of research that identifies trends in existing textile solutions; interpret and apply this understanding in a design context. **[4 - 7]**	• Identify complex associations linking principles of good design and technological knowledge. • Demonstrate and understand the significance of trends in existing textile solutions; reinterpret and apply this understanding in imaginative ways. **[8 - 10]**
Designing	**Designing**	**Designing**
• Demonstrate a limited response to a brief and produce a simple specification for a textile. • Produce one or two simple design ideas using a limited range of strategies. **[0 - 4]**	• Demonstrate an appropriate response to a brief and produce a suitable specification for a textile. • Produce creative ideas and communicate these by using appropriate strategies. **[5 - 9]**	• Demonstrate an appropriate and considered response to a brief and produce a detailed specification for a textile. • Produce creative and original ideas by generating, developing and communicating designs using appropriate strategies. **[10 - 13]**

Basic ability	Demonstrates ability	Works competently with independence
Making	**Making**	**Making**

• Plan and organise activities:
  1. Select appropriate materials
  2. Select hand and machine tools as appropriate to realise the textile product.
• Work safely to assemble, construct and finish materials and components as appropriate.
• Use workshop/ design studio facilities as appropriate to realise the textile product.
 	
[0 - 5]
	• Plan and organise activities:
	  3. Select appropriate materials
	  4. Select hand and machine tools as appropriate to realise the textile product.
	• Work effectively and safely to assemble, construct and finish materials and components as appropriate.
	• Choose and use workshop/ design studio facilities as appropriate to realise the textile product.
	
	[6 - 11]
		• Plan and organise activities:
		  5. Select appropriate materials
		  6. Select hand and machine tools as appropriate to realise the textile product.
		• Work skilfully and safely to assemble, construct and finish materials and components as appropriate.
		• Assess and apply knowledge in the workshop/ design studio facilities as appropriate to realise the textile product.
		
		[12 - 16]

• Demonstrate a simple understanding of how to solve a technical problem as they arise. **[0 - 1]**	• Demonstrate a practical understanding and ability in solving some technical problems as they arise. **[2 - 3]**	• Demonstrate a practical and thorough understanding and ability in solving technical problems effectively & efficiently as they arise. **[4]**
• Simply record the making of the product using notes and/or photographic evidence. **[0 - 1]**	• Record key stages involved in the making of the product, provide notes and photographic evidence. **[2 - 3]**	• Record key stages involved in the making of the product, provide comprehensive notes and photographic evidence. **[4]**
Critical Evaluation	**Critical Evaluation**	**Critical Evaluation**
• Give a limited evaluation of the making process. **[0 - 1]**	• Give an evaluation of the making process. • Reflect on how to improve the making process. **[2 - 3]**	• Critically evaluate the processes involved in making the final product/prototype. • Reflect and suggest modifications to improve the making process. **[4 - 5]**

Basic ability	Demonstrates ability	Works competently with independence
Designing	**Designing**	**Designing**
• Demonstrate a limited response to a brief and produce a simple specification for a textile product. **[0-1]**	• Demonstrate an appropriate response to a brief and produce a suitable specification for a textile product as a result of analysis. **[2-3]**	• Demonstrate an appropriate and considered response to a brief and produce a detailed specification for a textile product as a result of analysis. **[4]**
• Produce one or two design ideas showing little flair or innovation, using a limited range of strategies. **[0-5]**	• Produce a range of creative ideas showing innovation and flair. Communicate these ideas by using appropriate strategies. **[6-8]**	• Produce a wide range of creative and original ideas by generating, developing and communicating designs using appropriate strategies. **[9-12]**
Making	**Making**	**Making**

• Plan and organise activities:
   7. Select and use appropriate materials.
   8. Select and use hand and machine tools as appropriate to textiles technology.
• Work safely to construct and finish materials and components as appropriate when making textile products.
• Use workshop/design studio facilities as appropriate to realise the textile product.
• The product will exhibit a low standard of outcome and may not be successfully completed.
 	
[0-9]
	• Plan and organise activities:
	   9. Select and use appropriate materials.
	   10. Select and use hand and machine tools as appropriate to textiles technology.
	• Work effectively and safely to construct and finish materials and components as appropriate when making quality textile products.
	• Select and use workshop/design studio facilities as appropriate to realise the textile product.
	• The product will be completed to a good standard and will meet most of the requirements of the final product specification.
	
	[10-17]
		• Plan and organise activities:
		   11. Select and use appropriate materials.
		   12. Select and use hand and machine tools as appropriate to textiles technology.
		• Work skillfully and safely to construct and finish materials and components as appropriate when making quality textile products.
		• Assess and apply knowledge in the workshop/design studio facilities as appropriate to realise the textile product.
		• The product will be completed to a high standard and will fully meet the requirements of the final product specification.
		
		[18-24]

• Demonstrate a simple understanding of how to solve technical problems as they arise. **[0-2]**	• Demonstrate a practical understanding and ability in the solving of some technical problems as they arise. **[3-4]**	• Demonstrate a practical and thorough understanding in the solving of technical problems effectively & efficiently as they arise. **[5-6]**
• Simply record the making of the product using notes and/or photographic evidence. **[0-2]**	• Record key stages involved in the making of the product, provide notes and photographic evidence. **[3-4]**	• Record key stages involved in the making of the product, provide comprehensive notes and photographic evidence. **[5-6]**

Basic ability	Demonstrates ability	Works competently with independence
Critical Evaluation	**Critical Evaluation**	**Critical Evaluation**
• Give a limited evaluation of the finished product with some reference to the specification.	• Give an evaluation of the finished product with reference to the specification.	• Critically evaluate the finished product against the specification.
• There is no evidence of testing the product in use.	• Show superficial testing and reflect on how to improve the product.	• Undertake detailed testing; present meaningful conclusions leading to proposals for modifications to improve the product.
[0-2]	**[3-5]**	**[6-8]**

Appendix C: Controlled Assessment Themes – Unit A571 and Unit A573

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The task for this unit is for the candidate to produce a prototype product, capable of evaluation and a concise portfolio of work to support the designing and modelling process.

Candidates **must** select one of the following themes as a starting point for the task.

Centres are permitted to contextualise the theme and starting point appropriately to reflect centre or community resource and access to local business and industry that may add realism to the candidates' work.

Teachers are required to ensure that candidates do **not** pursue the same 'theme' for their work as submitted or intended for submission for Unit A573.

Teachers must mark the task using the marking criteria provided in Appendix B (unit A571) of this specification.

In order to skilfully Design and Make their prototype product candidates should refer to the content of unit A574 and use designing, planning, making, materials, tools, equipment and process as appropriate.

Product/Theme	Outline/starting point
Eco-wear	Develop, design and remake a textile product by re-using the material or parts of an existing textile piece.
'Flash from Trash'	An evening dress suit or bodice suitable for this collection. (recycled or re-used materials)
'Cotton onto it!'	A child's casual top or play mat made from eco-friendly cotton textiles.
Jan Messent (A fibre artist)	A textile wall panel or cushion using Jan Messent as the starting point.
Recycled Denim	A new textile accessory or household product made from recycled denim items.
Traditional Techniques	Patch work or appliquéd bag suitable for a teenager
A blast from the past	a rag rug based on the theme 'Nature' using waste materials.
Sue Clow (Textile artist)	A hat or waistcoat using one of the techniques used by Sue Clow
Travel	A textile produrct to be used on the move.

Unit A573

The task for this unit is for the candidate to design and manufacture a product. The starting point for this task **must** be selected from a theme set by OCR and listed below.

Centres are permitted to contextualise the theme and starting point appropriately to reflect centre or community resource and access to local business and industry that may add realism to the candidates' work.

The task can be linked to a candidate's interest or such other influences such as competitions, commerce or the community.

Selection of an appropriate theme for the task will be made by the candidate and Centre taking account of constraints relating to resources and time available for completion of the task.

Teachers are required to ensure that candidates do **not** pursue the same 'theme' for their work as submitted or intended for submission for Unit A571.

Teachers must mark the task using the marking criteria provided in Appendix B (Unit A573) of this specification.

In order to skilfully Design and Make their prototype product candidates should refer to the content of unit A574 and use designing, planning, making, materials, tools, equipment and process as appropriate.

Exemplar Products	**Textile Technology**

Take inspiration from an art movement or 'Innovation' based on the twentieth century and develop a textile piece linked to this theme for an identified user group.

Trace the origins of textiles through history or from an historic house or museum. Design and make a textile item that reflects a chosen period for an identified user group.

Create a textile bag in the style of a favourite fibre artist or contemporary designer for an identified user group.

Textiles have been used to commemorate an occasion or celebrate an event. Create a textile piece for an identified user group that reflects a special occasion or event.

The 'camouflage' look in fabrics has become very fashionable for military, high street and recreational fashion. Produce an appropriate textile piece for an identified user group using a repeat pattern method or technique.

Nature makes good use of camouflage. Animals, reptiles, insects, birds and plants use camouflage for protection. Explore the theme 'Camouflage in Nature'.

The natural look in colours and fabrics is very fashionable in interior design and home furnishings.

Textiles can be used to express cultural roots and identity.

Fibre artists create textile items that bring structure and three-dimensionality into fashion and interior design. A sculptured textile piece is such a product.

Children's bed linen and soft furnishings can be based upon such themes as 'lollypops, lace and lipstick'.

As extreme sports become more popular and challenging, fabrics and fashion need to remain in-step with this trend.

Soft activity toys challenge toddlers and encourage their development through creative play.

Appendix D: Guidance for the Production of Electronic Controlled Assessment

The materials produced for Controlled Assessment in Units A571 and A573 form a Controlled Assessment portfolio, stored electronically.

Structure for evidence

A Controlled Assessment portfolio is a collection of folders and files containing the candidate's evidence. Folders should be organised in a structured way so that the evidence can be accessed easily by a teacher or moderator. This structure is commonly known as a folder tree. It would be helpful if the location of particular evidence is made clear by naming each file and folder appropriately and by use of an index, called 'Home Page.'

There should be a top level folder detailing the candidate's centre number, candidate number, surname and forename, together with the Unit code e.g. A571, so that the portfolio is clearly identified as the work of one candidate.

Each candidate produces evidence for the Controlled Assessment. The evidence for each element of the controlled assessment should be contained within a separate folder within the portfolio. Each of these folders is likely to contain separate files.

Each candidate's Controlled Assessment portfolio should be stored in a secure area on the centre network. Prior to submitting the Controlled Assessment portfolio to OCR, the centre should add a folder to the folder tree containing Controlled Assessment and summary forms.

Data formats for evidence

In order to minimise software and hardware compatibility issues it will be necessary to save candidates' work using an appropriate file format. (Further information on this topic is provided in the separate OCR guidance on digital Controlled Assessment submissions).

Candidates must use formats appropriate to the evidence that they are providing and appropriate to viewing for assessment and moderation. Open file formats or proprietary formats for which a downloadable reader or player is available are acceptable. Where this is not available, the file format is not acceptable.

Electronic Controlled Assessment is designed to give candidates an opportunity to demonstrate what they know, understand and can do using current technology. Candidates do not gain marks for using more sophisticated formats or for using a range of formats.

Evidence submitted is likely to be in the form of word processed documents, PowerPoint presentations, digital photos and digital video.

To ensure compatibility, all files submitted must be in the formats listed below. Word processed documents or PowerPoint presentations must be converted to HTML or PDF formats before submission. OCR will not accept compressed (zipped) file formats. Where new formats become available that might be acceptable, OCR will provide further guidance.

It is the centre's responsibility to ensure that the electronic portfolios submitted for moderation are accessible to the moderator and fully represent the evidence available for each candidate.

Accepted File Formats
Movie formats for digital video evidence
MPEG (*.mpg)
QuickTime movie (*.mov)
Macromedia Shockwave (*.aam)
Macromedia Shockwave (*.dcr)
Flash (*.swf)
Windows Media File (*.wmf)
MPEG Video Layer 4 (*.mp4)
Audio or sound formats
MPEG Audio Layer 3 (*.mp3)
Graphics formats including photographic evidence
JPEG (*.jpg)
Graphics file (*.pcx)
MS bitmap (*.bmp)
GIF images (*.gif)
Animation formats
Macromedia Flash (*.fla)
Structured markup formats
HTML (*html, *htm)
XML (*xml)
CSS (*css)
XSL (*xsl/*xslt)
Text formats
PDF (.pdf)

Please consult OCR guidance on digital Controlled Assessment submissions for advice on compatibility of versions of these file formats.